

Dickinson County

Estimated Economic Impact of Agriculture, Food, and Food Processing Sectors

6/26/2017

Using the most recent IMPLAN data available (2015) adjusted for 2017, 19 agriculture, food, and food processing sectors were analyzed to determine their overall contribution to the Dickinson County economy.¹

These 19 sectors have a total direct output of approximately **\$665.6 million** and support **2,222.2 jobs** in Dickinson County. Running the model for all 19 sectors simultaneously produces the following results:

Agriculture, Food, and Food Processing Sector Contribution to Overall Dickinson County Economy						
Impact Type ²	Employment	% Employment	Total Value Added ³	Total Value Added % of Gross Regional Product ⁴	Output ⁵	Output % of Gross Regional Product
Direct Effect	2,222.2	24.22%	\$129,026,141	22.17%	\$665,600,093	114.36%
Indirect Effect	504.7	5.50%	\$43,649,585	7.50%	\$86,062,044	14.79%
Induced Effect	217.7	2.37%	\$14,606,723	2.51%	\$27,295,846	4.69%
Total Effect	2,944.6	32.09%	\$187,282,449	32.18%	\$778,957,982	133.84%

As shown in the above table, agriculture, food, and food processing sectors support **2,944.6 jobs**, or **32.09%** of the entire workforce in the county. These sectors provide a total economic contribution of approximately **\$779.0 million**, **roughly 133.84% of the economy**.

Another metric used to calculate the importance of sectors in an economy is their value added as a percentage of GRP. Total value added by the 19 agriculture, food, and food processing sectors is approximately **\$187.3 million**, or **32.18% of the GRP**. This indicates that personal income, business income, and taxes generated by these sectors account for **32.18% of the total economy**.

The following tables document the overall summary numbers of the model, top industries affected by employment and output, and a listing of all industries that were analyzed.

1 Article on building a contribution analysis in IMPLAN that avoids double counting:

http://www.implan.com/index.php?option=com_content&view=article&id=660%3A660&catid=253%3AKB33&Itemid=70

2 Direct, indirect, and induced effects sum together to estimate the total economic contribution in the state. **Direct effects** capture the contribution from agricultural and food products. **Indirect effects** capture the economic benefit from farms and agricultural businesses purchasing inputs from supporting industries within the state. **Induced effects** capture the benefits created when employees of farms, agricultural businesses, and the supporting industries spend their wages on goods and services within the state.

3 Value added = labor income + indirect business taxes + other property type income.

4 GRP = final demand of households + governments expenditures + capital + exports - imports - institutional sales.

5 Output = intermediate inputs + value added.

In the top ten agriculture, food, and food processing sectors by employment, the confectionery manufacturing from purchased chocolate sector is the top employer with **738.5 employees**. This table also shows the amount of jobs that are created by the agriculture industry in Dickinson County.

Top Ten Agriculture, Food, and Food Processing Sectors by Employment		
Sector	Total Employment	Total Output
Confectionery manufacturing from purchased chocolate	738.5	\$225,566,543
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	704.5	\$92,488,675
Farm machinery and equipment manufacturing	257.0	\$136,712,750
All other crop farming	155.6	\$12,858,908
Wholesale trade	125.0	\$26,354,745
Grain farming	115.0	\$46,099,896
Truck transportation	71.0	\$11,832,577
Veterinary services	52.6	\$5,471,652
Support activities for agriculture and forestry	50.9	\$4,627,587
Dairy cattle and milk production	39.4	\$15,430,716

The confectionery manufacturing from purchased chocolate sector directly contributes approximately **\$225.6 million** to the Dickinson County economy. The table below also shows the amount of revenue that is generated in other industries by having a strong agriculture industry.

Top Ten Agriculture, Food, and Food Processing Sectors by Output		
Sector	Total Employment	Total Output
Confectionery manufacturing from purchased chocolate	738.5	\$225,566,543
Farm machinery and equipment manufacturing	257.0	\$136,712,750
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	704.5	\$92,488,675
Flour milling	35.8	\$52,828,336
Other animal food manufacturing	37.2	\$51,774,834
Grain farming	115.0	\$46,099,896
Wholesale trade	125.0	\$26,354,745
Oilseed farming	15.8	\$19,307,797
Dairy cattle and milk production	39.4	\$15,430,716
All other crop farming	155.6	\$12,858,908

Below is a summary of all agriculture data with employment levels and output level. These values can tell how many jobs are represented by each agriculture, food, and food processing sector and the output they contributed to the Dickinson County economy.

All Agriculture, Food, and Food Processing Sectors		
Sector	Total Employment	Total Output
Oilseed farming	15.8	\$19,307,796.48
Grain farming	115.0	\$46,099,895.48
Vegetable and melon farming	0.1	\$14,689.33
Fruit farming	0.9	\$84,505.26
Tree nut farming	0.1	\$26,802.20
Greenhouse, nursery, and floriculture production	0.0	\$3.05
All other crop farming	155.6	\$12,858,907.70
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	704.5	\$92,488,670.35
Dairy cattle and milk production	39.4	\$15,430,715.56
Poultry and egg production	0.2	\$198,024.12
Animal production, except cattle and poultry and eggs	25.7	\$3,623,156.31
Other animal food manufacturing	37.2	\$51,774,833.68
Flour milling	35.8	\$52,828,338.62
Confectionery manufacturing from purchased chocolate	738.5	\$225,566,543.58
Bread and bakery product, except frozen, manufacturing	14.9	\$1,616,079.93
Frozen cakes and other pastries manufacturing	0.9	\$136,382.52
Farm machinery and equipment manufacturing	257.0	\$136,712,753.30
Veterinary services	52.6	\$5,471,652.03
Landscape and horticultural services	28.1	\$1,360,342.86

All 105 counties in Kansas have an IMPLAN model and an agriculture, food, and food processing contribution summary. These values do not factor in the retail environment of food sales. Food retail is important, but in order to provide the most accurate picture of what production agricultural and processing contributes to Dickinson County, the retail sector was omitted.